wherein providing comprises: providing in all but the last of the frames in the burst transmission a contention control indicator for indicating contention-free access and providing in all of the frames in the burst transmission the associated priority level so that the burst transmission may be interrupted by another of the stations having a pending frame with a higher priority level than the associated priority level. --

-- 13. (Amended) A media access control unit for bounding latency of transmissions by stations on a shared access medium comprising:

a transmit handler to associate one of multiple priority levels with a transmission and to control the amount of time the transmission occupies the shared access medium based on the associated priority level,

wherein the transmission is a burst transmission and the transmit handler comprises:

a segmentation unit for segmenting a MAC service data unit into segments for transmission in frames on the shared access medium in the burst transmission; and

a frame transmit unit for providing segments in frames in the burst transmission at the associated priority level, and

wherein the frame transmit unit provides a set contention control indicator for indicating contention-free access in all but the last of the frames in the burst transmission and provides in all of the frames in the burst transmission the associated priority level so that the burst transmission may be interrupted by another of the stations having a pending frame with a higher priority level than the specified priority level. --

Please add claims 16-25.

-- 16. A method of reducing latency of transmission by stations on a shared access medium, the method comprising

having a first station begin a burst transmission of frames;

associating one of multiple priority levels with the burst transmission;

providing an inter-frame contention phase between frames;

during the inter-frame contention phase, having the first station signal the priority level of the burst transmission and signal that the first station desires contention-free access to complete the burst transmission;

during the inter-frame contention phase, having at least a second station contend to interrupt the burst transmission with a second transmission by signaling a priority level associated with the second transmission; and

having the first station interrupt the burst transmission in the event that the priority level signaled by the second station is higher than the priority level of the burst transmission. --

-- 17. The method of claim 16 wherein having the first station signal that the first station desires contention free access comprises setting a contention control indicator. --

-- 18. The method of claim 16 further comprising having the first station resume the burst transmission in the event that no other station contends with a higher priority during the inter-frame contention phase. --

-- 19. The method of claim 16 wherein the frames of the burst transmission comprise segments of a segmented MAC service data unit. --

-- 20. The method of claim 16 wherein the first and second station signal the priority level of their transmissions by signaling during predetermined priority slots during the inter-frame contention phase. --

-- 21. A media access control unit for reducing latency of transmission by stations on a shared access medium, wherein one such medium access control unit is associated with each of a plurality of stations, and wherein the medium access control unit has the capability of

beginning a burst transmission of frames;

associating one of multiple priority levels with the burst transmission;

providing an inter-frame contention phase between frames;

during the inter-frame contention phase, having the station transmitting the burst transmission signal the priority level of the burst transmission and signal that the station desires contention-free access to complete the burst transmission;

during the inter-frame contention phase, having the station transmitting the burst transmission listen for the priority level of another station contending to interrupt the burst transmission with a second transmission; and

interrupting the burst transmission in the event that the priority level signaled by the other station is higher than the priority level of the burst transmission. --

-- 22. The media access control unit of claim 21 wherein having the station signal that the station desires contention free access comprises setting a contention control indicator. --

-- 23. The media access control unit of claim 21 further comprises resuming the burst transmission in the event that no other station contends with a higher priority during the inter-frame contention phase. --

-- 24. The media access control unit of claim 21 wherein the frames of the burst transmission comprise segments of a segmented MAC service data unit. --

-- 25. The media access control unit of claim 21 wherein station signal the priority level of a transmissions by signaling during predetermined priority slots during the inter-frame contention phase. --